REMARKS

Claims 1-11, 15-24 and 28-42 are all the claims pending in the application. By this Amendment, Applicant amends claims 6, 20, 22, 28, 29, 38, and 41 to further clarify the invention. Applicant respectfully submits that the amendments to these claims are made to further clarify inherent features in these claims. Applicant respectfully submits that these claim amendments are not viewed as narrowing amendments. In addition, Applicant adds claims 43 and 44, which are clearly supported throughout the specification.

I.   Summary of the Office Action

Claims 1-4, 6, 7, 15-18, 20-24, 36, 38, 39, and 41 are rejected under 35 U.S.C. § 102 and claims 5, 8-11, 19, 28, 29, 31-35, 37, and 40 are rejected under 35 U.S.C. § 103(a). Claim 42 contains allowable subject matter.

II.   Statement of Substance of the Interview and Claim Rejections under 35 U.S.C. § 102

The Examiner maintained that claims 1-4, 15-18, and 41 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,729,471 to Jain et al. (hereinafter "Jain") and claims 6, 7, 20-24, 36, 38, and 39 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,769,713 to Katayama (hereinafter "Katayama"). Applicant respectfully traverses these rejections in view of the following remarks.

To be an "anticipation" rejection under 35 U.S.C. § 102, the reference must teach every element and recitation of the Applicant's claims. Rejections under 35 U.S.C. § 102 are proper only when the claimed subject matter is identically disclosed or described in the prior art. Thus,

the reference must clearly and unequivocally disclose every element and recitation of the claimed invention.

In view of the maintained rejections, Applicant's Representative has contacted the Examiner to discuss the rejections of record. Applicant thanks the Examiner for the courteous in person interview on May 2, 2006. An Examiner's Interview Summary Record (PTO-413) was given to Applicant's Representative after the interview. The PTO-413 requires the Applicant to file a Statement of Substance of the Interview. The Statement of Substance of the Interview is as follows:

During the interview, distinctions between independent claims 1 and 6 and Jain and Katayama references were discussed. The Examiner indicated that she will further consider and search for these features when a formal response is provided. The formal response is set forth below.

CLAIMS 1-4 15-18 AND 41

During the interview, Applicant also noted that claim 41 is improperly rejected. Claim 41 stands rejected as being anticipated by Katayama. However, since claim 1 is not anticipated by Katayama, its dependent claim 41 cannot be anticipated by Katayama. Examiner noted this inconsistency.

Further, independent claim 1, among a number of unique features, recites:

```
        data processing means for generating a
        data list indicating, in time series, a
        temporal transition of a position and a
        state of said object picked up by said
        image-pick up means, with respect to a
        time;...and
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> display means for displaying at least one
> of said data list generated by said data
> processing means and said image animated
> by said animating means,
>
> wherein the display means is operable to
> display <u>said</u> data list and said animated
> image (emphasis added).

That is, the data processing means generates a data list that indicates temporal transitions and state of the objects. This data list is then displayed. In other words, the data processing means extracts and/or generates <u>numerical data from the picked-up images</u>, thereby providing the user with numerical analysis of a sports game, which may be displayed in a chart format, a graph, a list, or in some other form. In other words, numeric values are generated from the stored images and these numeric values are analyzed to create meaningful statistics.

Jain, on the other hand, relates to selecting real video/television images of a scene from multiple real video/television images of the scene for various selective viewing by the user. Jain discloses presenting the user with two-dimensional images or building three-dimensional images by using multiple video cameras or building images that best track a particular object. (*see* Fig. 1; Abstract; col. 7, line 13 to col. 8, line 57 and col. 16, lines 29 to 44). In Jain, however, the video display 18 only displays the particular two-dimensional image of the real-world scene showing the object to the viewer and not a data list that indicates the temporal transition of a position and a state of a picked up object, as set forth in claim 1.

That is, Jain discloses an environmental builder 12 creating 3-D and 2-D maps used for <u>internal processing</u> in order <u>to generate custom video images</u> (col. 20, line 65 to col. 21, line 3). <u>These maps, however, are not displayed</u>. In other words, since Jain is concerned with generating

video images and not with statistical analysis, there is no disclosure or suggestion of providing

the 3-D and 2-D maps on the display.

Jain further discloses a viewer selecting points on the screen and <u>inputting</u> various

information for each feature point. The system reads image coordinates of the feature points and

generates a two-dimensional description (from the user input) that consists of a list describing the

players and a list describing the field marks. The player descriptions include each player's name

and the coordinates of each player's image. The field mark descriptions include the positions (in

the three-dimensional world), and the image coordinates, of all the field marks (col. 22, lines 27

to 55). That is, the list of players is <u>input by the user</u> and is <u>not generated from the picked-up</u>

<u>images by the data processor means</u>. Moreover, in Jain, there is no disclosure or suggestion of

<u>displaying</u> this two-dimensional description of the players to the viewer. On the contrary, only

the image, in which the viewer may select a feature point to input desired information, is

displayed (col. 22, lines 22 to 28).

The Office Action indicates that Fig. 4 of Jain shows a data list, as set forth in claim 1

(*see* page 16 of the Office Action). However, with respect to Fig. 4, Jain discloses (col. 21, lines

4 to 13):

> The interactive video interface of the
> system is shown in FIG. 4. The video
> screen of FIG. 4 shows video frames taken
> from laser disc. Video control buttons
> control video playback. Using <u>a camera</u>
> <u>list, a viewer can choose any camera.</u>
> Using <u>a player list, a viewer can choose</u>
> <u>certain players to be focused on.</u> If a
> viewer doesn't select a camera, then the
> system automatically selects the best
> camera. Also, multiple viewers can

> interact using the three-dimensional
> cursor. These new features are described
> below. Some interface features for the
> interactive video are shown here. A user
> can select one of the many items to focus
> in the scene (emphases added).

In other words, a player list is a mere list of players to allow a user to chose a player so that the

video images displayed will focus on the chosen player. That is, there is no disclosure in Jain

that this list of players is generated from the picked up image or that it contains temporal

positions and states of the picked-up object with respect to time. Clearly, Jain does not disclose

or suggest displaying the data list generated by the processing means, where the data list

indicates temporal transition of a position and state of the picked-up object.

In short, Jain relates to creating video images and not to statistical analysis and as such

does not disclose or suggest at least generating and displaying the data list set forth in claim 1.

Jain only discloses using maps for internal processing to generate images for display and having

a user input a description list. For at least these exemplary reasons, Applicant respectfully

submits that independent claim 1 is patentably distinguishable from (and is patentable over) Jain.

Claims 2-4 are patentable at least by virtue of their dependency on claim 1. Therefore, it is

appropriate and necessary for the Examiner to withdraw this rejection of claims 1-4 and 41.

Independent claim 15 contains features similar to the features argued above with respect

to claim 1. Therefore, arguments submitted with respect to claim 1 are respectfully submitted to

apply with equal force here. For at least substantially analogous exemplary reasons, therefore,

Applicant respectfully submits that claim 15 is patentably distinguishable (and is patentable

over) Jain. Claims 16-18 are patentable at least by virtue of their dependency. Therefore,

Applicant respectfully requests the Examiner to withdraw this rejection of claims 15-18.

CLAIMS 6, 7, 20-24, 36, 38, AND 39

During the interview, Applicant also noted that the rejection of claim 36 as being

anticipated by Katayama is improper. Claim 36 depends on claim 35. As acknowledged on page

13 of the Office Action, Katayama does not teach or suggest all of the unique features of claim

35. Accordingly, Katayama alone cannot anticipate or render obvious a claim that depends upon

claim 35 *i.e.*, claim 36. Examiner noted the inconsistency.

Of these remaining rejected claims, only claims 6, 20, 22, and 38 are independent.

Independent claim 6, among a number of unique features, recites:

```
data processing means for generating image
data by picking up an image of a sports
game, for processing said picked-up image
data generated in accordance with a
predetermined format, and for storing said
processed image data in said predetermined
format;

interface means connected to said data
processing means comprising an instruction
entering means for entering a plurality of
instructions, said interface means also
receives said processed image data in said
predetermined format from said data
processing means, converts said processed
image data into one of predetermined forms
based on an entered instruction which is a
selection of one of the predetermined
forms, and outputs said converted data;
and...

wherein said predetermined forms comprise
a chart, a numerical list, an image, and a
video, and wherein said interface means is
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        operable to convert said processed image
        data into each of a chart, a numerical
        list, an image, and a video.
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Applicant respectfully maintains that in Katayama the image data is not converted into numerical values (*e.g.* a numeric list) *i.e.*, the initial numeric data is entered manually by a user, *e.g.*, by a team scorer. In other words, it is not the picked up image data that is converted into a predetermined format and based on user instructions is output in a predetermined form *i.e.*, a chart, numerical list, an image, and a video. In Katayama, charts being displayed are generated from the numeric data entered/input by the scorer (col. 1, line 53 to col. 2, line 3).

In response to Applicant's arguments, the Office Action relies on col. 4, lines 64 to 68 of Katayama. Applicant respectfully maintains that claim 6 recites: "said interface means also receives said processed image data in said predetermined format from said data processing means, converts said processed image data into one of predetermined forms based on an entered instruction which is a selection of one of the predetermined forms ... said predetermined forms comprise a chart, a numerical list, an image, and a video, and wherein said interface means is operable to convert said processed image data into each of a chart, a numerical list, an image, and a video." That is, based on user selection of a form, the picked-up image data is converted into the form selected by the user. In Katayama, user numeric input and not image data is converted into various formats for a display (*e.g.*, Fig. 17, col. 7, lines 10 to 22 and col. 6, lines 45 to 49). In short, Katayama does not disclose or suggest converting picked-up, processed image data into various forms such as numeric list, a chart, an image and a video.

For at least these exemplary reasons, Applicant respectfully submits that independent claim 6 is patentably distinguishable from (and is patentable over) Katayama. Claim 7 is

patentable at least by virtue of its dependency on claim 6. Therefore, it is appropriate and

necessary for the Examiner to withdraw this rejection of claims 6 and 7.

Next, independent claims 20, 22, and 38 contain features that are somewhat similar to,

although not necessarily coextensive with, the features argued above with respect to claim 6.

Therefore, arguments submitted with respect to claim 6 are respectfully submitted to apply with

equal force here. For at least substantially analogous exemplary reasons, Applicant respectfully

submits that claims 20, 22, and 38 are patentably distinguishable (and are patentable over)

Katayama. Claims 21, 23, 24, and 39 are patentable at least by virtue of their dependency on

claim 20, 22, or 39. Therefore, Applicant respectfully requests the Examiner to withdraw this

rejection of claims 20-24, 38, and 39.

III.   Claim Rejections - 35 USC § 103

Claims 5, 8-11, 19, 28, 31-34, 37, and 40 are rejected under 35 U.S.C. § 103(a).

Applicant respectfully traverses these rejections in view of the following comments.

CLAIMS ARE PATENTABLE OVER JAIN

Claims 5, 19, 28, and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable by

Jain. Claim 5 depends on claim 1 and claim 19 depends on claim 15. Applicant has already

demonstrated that the unique features of the independent claims 1 and 15 are not obvious in view

of Jain. Therefore, claims 5 and 19 are patentable at least by virtue of their dependency on

claims 1 and 15, respectively.

Regarding claim 28, it contains features similar to, although not necessarily coextensive

with, the features argued above with respect to claim 1. Applicant has already demonstrated that

the disclosure of Jain does not render claim 1 obvious. Therefore, arguments submitted with

respect to claim 1 are respectfully submitted to apply with equal force here. For at least

substantially analogous reasons, Applicant respectfully submits that claim 28 is patentable over

Jain. Claims 31-33 are patentable at least by virtue of their dependency. Therefore, Applicant

respectfully requests the Examiner to withdraw this rejection of claims 28 and 31-33.

CLAIMS ARE PATENTABLE OVER JAIN IN VIEW OF KATAYAMA

Claims 28, 29 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Jain in view of Katayama. It is Applicant's position that the Examiner meant to reject claims 28-

33 under 35 U.S.C. § 103(a) as being unpatentable over Jain in view of Katayama. Applicant

respectfully traverses this rejection in view of the following comments.

Of these rejected claims, only claims 28 and 29 are independent. Independent claims 28

and 29, among a number of unique features, require "<u>recording temporal image data of</u> a specific

object; generating a data list<u> from the recorded temporal image data of the specific object</u>, said

data list comprising position coordinates of said object and flags indicating a state of said object

at a plurality of points in time;... and....displaying said desired output in a desired format chosen

from a plurality of formats, said plurality of formats comprise a chart, a graph, a numeric list,

and a video." That is, an image data is recorded from which a data list is generated, which is

then output in various formats based on what type of analysis the user wishes to perform.

Jain, however, only discloses various types of processing of the recorded image data for

generating a 3-D video data or video data focused on a particular object (col. 1, lines 20 to 32).

That is, Jain does not disclose or suggest obtaining the data list (numerical, statistical data) from

the recorded video and displaying the data list in various formats. Katayama does not cure the

deficient disclosure of Jain. That is, Katayama discloses user inputting collectable information

and presenting this information in various formats (col. 1, lines 5 to 10). Katayama, however, does not disclose or suggest converting recorded image data into a data list and presenting this data in various formats.

Moreover, one of ordinary skill in the art would not have been motivated to combine the references in the manner suggested by the Examiner. Specifically, the Examiner alleges incorporating Katayama into the system of Jain to allow the display of collectable information in various forms such as characters and diagrams (*see* page 9 of the Office Action). Applicant respectfully submits that in the system of Jain, there is no such collectable information as the one disclosed in Katayama (where a team scorer collects information about the game and manually inputs it into the memory of the touch board). That is, Katayama only discloses providing in various formats information input by the user and not the video recorded by the video cassette. Since, in Jain, there is no collectable information, one of ordinary skill in the art would not have been motivated to include the display of various formats, as disclosed in Katayama. Moreover, combining the references in the manner suggested by the Examiner would change the principle operation of the invention, as it would require different types of outputs, additional inputs, and more complex processing. In fact, if it would have been obvious to combine the references in the manner suggested by the Examiner, then in Katayama, the recorded video data would also be provided in a numerical form as opposed to just the collectible data manually input by the user.

In other words, one of ordinary skill in the art would not have and could have combined Jain with Katayama. Moreover, as explained above, the combined disclosure of Jain and

Katayama do not disclose or suggest all of the unique features of claims 28 and 29. Claims 30-33 are patentable at least by virtue of their dependency on claim 28 or 29.

CLAIMS ARE PATENTABLE OVER KATAYAMA IN VIEW OF TAMIR

Claims 8-11 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable by Katayama in view of Tamir. Independent claims 8 and 35, among a number of unique features, recite features similar to the features argued above with respect to claim 6. Therefore, with respect to Katayama, these arguments are submitted to apply with equal force here. Tamir does not cure the deficient teachings of Katayama.

Tamir only discloses converting data (user selected object) received from the highlighter into a video standard format to display a video clip or a number of still images. Tamir, however, fails to disclose, based on the type of the instruction, converting recorded data into a variety of forms such as a chart, a graph and so on. Tamir deals with monitoring the movement of objects, whereas these forms of representation (charts, graphs, etc.) are associated with statistical analysis and are clearly absent from Tamir's disclosure.

Therefore, the combined teachings of Tamir and Katayama, even if somehow combined, would not render obvious the unique features of claims 8 and 35. The combined teachings of Tamir and Katayama lack converting image data into a variety of forms including a chart, a graph, and so on. Claims 9-11 are patentable at least by virtue of their dependency on claim 8. As a result, it is appropriate and necessary for the Examiner to withdraw this rejection of claims 8-11 and 35.

CLAIMS ARE PATENTABLE OVER KATAYAMA IN VIEW OF JAIN

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable by Katayama in view of Jain. Claim 34 depends on claim 20. Applicant has already demonstrated that Katayama does not disclose or suggest all of the unique features of claim 20. Jain (as also explained above) does not cure the deficient teachings of Katayama. That is, Jain does not disclose or suggest generating numerical data from the image data for a statistical display in a form of a data list, a graph, a chart, and so on. Therefore, the combined teachings of Katayama and Jain, taken alone or in any conceivable combinations, fail to teach or suggest all of the unique features of claim 20. Claim 34 is patentable at least by virtue of its dependency on claim 20. Therefore, Applicant respectfully requests the Examiner to withdraw this rejection of claim 20.

CLAIMS ARE PATENTABLE OVER KATAYAMA IN VIEW OF ROSSER AND TAMIR

Finally, claims 37 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable by Katayama in view of Rosser and Tamir. Of these claims, claim 37 is independent and claim 40 depends on claim 38. Applicant has already demonstrated that Katayama and Tamir, taken alone or in any conceivable combination, do not disclose or suggest generating a numeric list from an image data and displaying this generated numeric list. Rosser is only cited for its disclosure of simultaneous display of an ongoing game and some other object such as a score board, which is recorded by another camera. Clearly, Rosser does not cure the deficient teachings of Katayama and Tamir. Therefore, the unique features of independent claims 37 and 38 are not obvious over the combined teachings of Katayama, Rosser, and Tamir. In view thereof, claim 40 is patentable at least by virtue of its dependency on claim 38. Hence, it is appropriate and necessary for the Examiner to withdraw this rejection of claims 37 and 40.

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IV.   New Claim

In order to provide more varied protection, Applicant adds claims 43 and 44, which are

patentable at least by virtue of their dependency on claim 1.
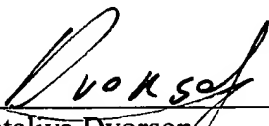
V. Allowable Subject Matter

Applicant thanks the Examiner for indicating that claim 42 contains allowable subject

matter. Applicant respectfully holds in abeyance the rewriting of this claim into its independent

form until arguments presented with respect to claim 1 have been reconsidered.

VI.   Conclusion and request for a telephone interview

In view of the above, reconsideration and allowance of this application are now believed

to be in order, and such actions are hereby solicited. If any points remain in issue, the Examiner

is kindly requested to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue

Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any

overpayments to said Deposit Account.

Respectfully submitted,

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23373
CUSTOMER NUMBER

Date: May 19, 2006

Attorney Docket No.: Q65606

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